First 2 Week Worksheet

1.) What is an example of Hydrogen bonding
a. HCN
b. NaCl
c. HF
d. CO2

2.) What is the Valence of Nitrogen?
a. 7
b. 5
c. 3
d. 2

3.) True or false: Sodium (Na) is one of the four essential elements of life.
a. True
b. False

4.) Select all that applies: What is true regarding Hydrogen bonding
a. An ionic bond between Hydrogen and another element
b. Covalent bonding
c. Equal sharing of elections
d. Occupies Partial charges

5.) True or false: All amino acids are enantiomers

6.) pH is the __

a. A scale from 1-10 that describes the acidity of a substance
b. Measure of H+ concentration in a solution/substance
c. Magic that turns tester slips blue or red
d. Measure of OH concentration in a solution/substance

7.) Cohesion is best described as
a. Water molecules' tendency to attract to other molecules
b. The reason why ice floats water
c. Water molecules' tendency to attract to other water molecules
d. Water's resistance to changing temperatures

8.) What is the pH of a solution that has a [H+] concentration of ? Is it an acid or base?

9) What is the pH of a solution that has an [OH-} concentration of ? Is it an acid or base?

10) If a solution has a pOH of 8, what is the pH?

11.) An Isomer is ____
a. The same element with a different number of neutrons
b. Similar molecules with similar shapes
c. Different molecules with the same structure
d. The same molecule with different structure.

12.) What is true about enantiomers
a. They have 4 unique attachments
b. They are identical in image
c. They are mirrored images but have the exact same function
d. They have a O central atom

13.) Name and draw the common 7 functional groups

14.) What is the monomer for Protiens?
   a. Nucleotides
   b. Monosaccharides
   c. Fatty acids
   d. Amino acids
15.) What best describes the structure of Carbohydrates?
   a. A large hydrophobic chain of carbons and hydrogens
   b. (CH2O)
   c. An amino group, a side chain, and a carbonyl group
   d. Individual nucleotides that combine together to form a polynucleotide
16.) Metabolism is
   a. The sum of all the energy a cell produces
   b. All the energy the cell uses to maintain its function
   c. All the chemical reactions in a cell, both using and producing energy
   d. The same in every organism